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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/723,407	11/28/2000	Masanori Akiyama	FUJY 18.006	6280
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KATTEN MUCHIN ZAVIS ROSENMAN			MILLS, DONALD L	
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NEW YORK, NY 10022-2585			PAPER NUMBER	

2662

DATE MAILED: 03/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

RP9

Office Action Summary

Application No.

09/723,407

Applicant(s)

AKIYAMA ET AL.

Examiner

Donald L Mills

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 November 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 1 and 13 are objected to because of the following informalities:

Regarding claim 1, the claim specifies *a network system comprising ... wherein* (See claim 1, lines 1-8.) The transition from the claim preamble to the body of the claim is unclear.

Regarding claim 13, the claim specifies “themulticast” which should be corrected to “the multicast” and “outmulticast” which should be corrected to “out multicast” (See claim 13, lines 4 and 8.) Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1-5 and 9, the claims recite the limitations "said second gateway" and "a second gateway" (See claim 1, lines 5 and 25.) There is insufficient antecedent basis for these limitations in the claim. It is unclear which of the plurality of second gateways these terms refer too.

Regarding claims 11 and 12, the claims recite the limitations “said gateway” and “a other gateway” (See claim 11, lines 6 and 13.) There is insufficient antecedent basis for these limitations in the claim. It is unclear which of the plurality of gateways these terms refer too.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 3-5, and 9-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Mizuta et al. (6,584,110 B1), hereinafter referred to as Mizuta.

Regarding claim 1, Mizuta discloses a voice gateway and route selection method, which comprises:

Said first gateway, when a call is set between said first line switching network and said second line switching network through said IP packet network, receives a call setting message from said first line switching network (Referring to Figures 8 and 15, caller gateway 10 receives a call setup from the private exchange destined to a circuit switching network 30 via IP network 50. See column 8, lines 62-64.)

Said first gateway transmits a call-in enable/disable inquiry message to the IP packet network to specify a second gateway which can communicate the call setting message to the second line switching network (Referring to Figures 8 and 15, caller gateway 10 multicasts a

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connection request with the IP packets to the gateways **20** via IP network **50**. See column 9, lines 1-2.)

The call-in enable/disable inquiry message is received by at least one of said second gateways through said IP packet network (Referring to Figure 15, the LAN interface **84** of gateway **20** receives the IP packets. See column 9, lines 49-50.)

Said second gateway from which received the call-in enable/disable inquiry message, if said second gateway itself can communicate a call setting message to said second line switching network, transmits a call-in enable/disable inquire response message to said first gateway (Referring to Figures 8 and 15, each receiver gateway **20** returns the IP packets serving as a response to the caller gateway **10**. See column 9, lines 60-61.)

Said first gateway selects a second gateway for transmitting the call setting message within at least one of said second gateways to which transmitted the call-in enable/disable inquiry response message and transmits the call setting message to said selected second gateway (Referring to Figures 8 and 16, caller gateway **10** receives the response and selects a proper route based upon the response. See column 10, lines 10-12.)

Regarding claim 3, Mizuta discloses *wherein each of said second gateways participates or leaves with respect to a group for receiving call-in enable/disable inquiry message* (Referring to Figure 8, each receiver gateway **20** returns IP packets serving as a response to the caller gateway **10**. See column 9, lines 61-62.) And, *the call-in enable/disable inquire message is given to a second gateway which have been participating in the group* (Referring to Figure 8, an optimum route is determined, inherently comprising one of the receiver gateways **20**. See column 10, lines 58-59.)

Regarding claim 4, Mizuta discloses *wherein each of said second gateways, if said second gateway itself cannot communicate a call setting message transmitted from said first gateway to said second line switching network, leaves from the group* (Referring to Figure 16, if the response is invalid, the flow goes to step S175 and awaits the next response, inherently not considered part of the group of possible routes to the destination. See column 10, lines 28-29.)

Regarding claim 5, Mizuta discloses *wherein each of said second gateways, if said second gateway itself can communicate a call setting message transmitted from said first gateway to said second line switching network, participates in the group* (Referring to Figure 16, step S172 determines whether or not the response is valid, valid responses are inherently considered part of the group of possible routes to the destination. See column 10, lines 24-25.)

Regarding claim 9, Mizuta discloses *wherein the first gateway transmits the call setting message to a specific second gateway in said second gateways through said IP packet network* (Referring to Figure 8, an optimum route is determined, inherently comprising one of the receiver gateways 20 via IP Network 50. See column 10, lines 58-59.)

Thereafter, when said specific second gateway cannot communicate the call setting message to said second line switching network, said first gateway transmits the call-in enable/disable inquiry message to said IP packet network (Referring to Figure 16, if the response is invalid, the flow goes to step S175 and awaits the next response, inherently not considered part of the group of possible routes to the destination. See column 10, lines 28-29.)

Regarding claim 10, Mizuta disclose *wherein said first gateway, when receives the call setting message from the first line switching network, selects whether to transmit the call setting message to a specific second gateway in said second gateways* (Referring to Figure 8, an

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optimum route is determined, inherently comprising one of the receiver gateways **20** via IP Network **50**. See column 10, lines 58-59,) *or transmit the call-in enable/disable inquiry message to the IP packet network* (Referring to Figure 16, if the response is invalid, the flow goes to step **S175** and awaits the next response to the multicast connection request via the IP Network **50**. See column 10, lines 28-29.)

Regarding claim 11, Mizuta discloses a voice gateway and route selection method, which comprises:

A receiving unit, when a call is set between the first line switching network and the second line switching network, receiving a call setting message from the first line switching network (Referring to Figures 8 and 15, caller gateway **10** receives a call setup from the private exchange destined to a circuit switching network **30** via IP network **50**. See column 8, lines 62-64.)

A editing unit editing, when the call setting message is received by said receiving unit, a call-in enable/disable inquiry message for inquiring whether a other gateway itself can communicate the call setting message to the second line switching network or not (Referring to Figures 8 and 15, caller gateway **10** multicasts a connection request with the IP packets to the gateways **20** via IP network **50** when a call setup is requested by the private exchange. See column 9, lines 1-2.)

A transmitting unit transmitting the edited call-in enable/disable inquiry message to the IP packet network, the edited call-in enable/disable inquiry message is received by at least one of the plurality of other gateways through the IP packet network (Referring to Figure 15, caller

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gateway 10 multicasts a connection request with the IP packets via IP network 50 and the LAN interface 84 of gateway 20 receives the IP packets. See column 9, lines 1-2 and 49-50.)

Regarding claim 12, Mizuta discloses *a message receiving unit receiving a call-in enable/disable inquiry response message, the call-in enable/disable inquiry message is transmitted by a other gateway from which received the call-in enable/disable inquiry message, when the other gateway can communicate a call setting message to the second line switching network* (Referring to Figures 8 and 15, each receiver gateway 20 returns the IP packets serving as a response to the caller gateway 10. See column 9, lines 60-61.)

A selecting unit selecting a other gateway for transmitting the call setting message within the other gateways from which received the call-in enable/disable inquiry message, wherein said transmitting unit transmits the call setting message to the selected other gateway (Referring to Figure 8, an optimum route is determined, inherently comprising one of the receiver gateways 20 via IP Network 50. See column 10, lines 58-59.)

Regarding claim 13, Mizuta discloses *a table for holding a multicast address corresponding to a destination of the call setting message* (Referring to Figures 9 and 10, address conversion data used to find a group number from a phone number and a multicast IP address from the group number. See column 8, lines 56-68.)

A reading unit reading out the multicast address from said table, when said receiving unit receives the call setting message from the first line switching network (Referring to Figure 14, the address converter 88 retrieves a group number corresponding to the phone number from the address conversion data 101. See column 9, lines 15-17.)

Said editing unit edits a IP packet setting the call-in enable/disable inquiry message and the read out multicast address/Said transmitting unit transmits the edited IP packet to the IP packet network (Referring to Figures 8 and 15, caller gateway 10 multicasts a connection request with the IP packets to the gateways 20 via IP network 50 when a call setup is requested by the private exchange. See column 9, lines 1-2.)

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 2 is rejected under 35 U.S.C. 103(a) as being obvious over Mizuta et al. (6,584,110 B1), hereinafter referred to as Mizuta.

Regarding claim 2 as explained above in the rejection statement of claim, Mizuta discloses all of the claim limitations of claim 1 (parent claim). Mizuta does not disclose *wherein said first gateway selects a second gateway in which the call-in enable/disable inquiry response message arrived at said first gateway first.*

Mizuta teaches voice gateway and route selection method for transmitting voice over an IP network, which comprises selecting a route according to the delay time contained in the response satisfying a specified threshold (See column 10, lines 54-59.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize the route selection method of Mizuta by selecting the route with the

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combined shortest delay. One of ordinary skill in the art would have been motivated to do so in order to establish a route with the least amount of latency to improve the quality of service for transmitting voice over an IP network as taught by Mizuta (See column 4, lines 55-64.)

8. Claims 6-8 are rejected under 35 U.S.C. 103(a) as being obvious over Mizuta et al. (6,584,110 B1), hereinafter referred to as Mizuta, in view of Haggerty et al. (US 6,331,983 B1), hereinafter referred to as Haggerty.

Regarding claim 6 as explained above in the rejection statement of claim 1, Mizuta discloses all of the claim limitations of claim 1 (parent claim). Mizuta further discloses:

Wherein said network system further comprising a third gateway connected with said IP packet network, a third line switching network respectively connected with said third gateway and said second line switching network (Referring to Figures 8 and 15, gateways 20 receive a call setup from the private exchange destined to a circuit switching network 30 via IP network 50. See column 8, lines 62-64.)

Said first gateway, when cannot receive the call-in enable/disable inquiry response message from all said second gateways, transmits the call setting message to said third gateway (Referring to Figure 8, an optimum route is determined, inherently comprising one of the receiver gateways 20 that meet the predetermined threshold. See column 10, lines 58-59.)

Said third gateway, when receives the call setting message from said first gateway, transmits the call setting message to said third line switching network (Referring to Figures 8 and 16, caller gateway 10 receives the response and selects a proper route based upon the response, gateway 20 inherently transmitting the data. See column 10, lines 10-12.) Mizuta

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does not disclose *said third line switching network, when receives the call message from said first gateway, transmits the received call settings message to said second line switching network.*

Haggerty teaches a multicast switching method comprising a source switch that determines whether any local host attached to any of its access ports wishes to join the group address identified in the multicast packet. And, adds an entry to its connection table including the group address, the source address, and an output identifying the port to the local host wishing to join the group (to receive the multicast message) (See column 8, lines 10-16.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement multicast switching method of Haggerty in the system of Mizuta. One of ordinary skill in the art would have been motivated to do so in order to minimize the bandwidth consumption of transmitting multicast packets as taught by Haggerty (See column 2, lines 16-21.)

Regarding claim 7 as explained above in the rejection statement of claim 1, Mizuta discloses all of the claim limitations of claim 1 (parent claim). Mizuta further discloses:

Wherein said network system further comprising a plurality of third gateways connected with said IP packet network, a third line switching network respectively connected with each of said third gateways and said second line switching network (Referring to Figures 8 and 15, gateways 20 receive a call setup from the private exchange destined to a circuit switching network 30 via IP network 50. See column 8, lines 62-64.)

Said first gateway, when cannot receive the call-in enable/disable inquiry response message from all said second gateways, transmits the call-in enable/disable inquiry message to

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said IP packet network (Referring to Figures 8 and 15, caller gateway **10** multicasts a connection request with the IP packets to the gateways **20** via IP network **50**. See column 9, lines 1-2.)

The call-in enable/disable inquiry message is received by at least one of said third gateways through said IP packet network (Referring to Figures 8 and 15, each receiver gateway **20** returns the IP packets serving as a response to the caller gateway **10**, inherently requiring reception of the multicast packet. See column 9, lines 60-61.)

Said third gateway from which received the call-in enable/disable inquiry message, if said third gateway itself can communicate a call setting message to said third line switching network, transmits a call-in enable/disable inquiry response message to said first gateway (Referring to Figures 8 and 15, each receiver gateway **20** returns the IP packets serving as a response to the caller gateway **10**. See column 9, lines 60-61.)

Said first gateway selects a third gateway for transmitting the call setting message within at least one of said third gateways to which transmitted the call-in enable/disable inquiry response message and transmits the call setting message to said selected third gateway (Referring to Figures 8 and 16, caller gateway **10** receives the response and selects a proper route based upon the response inherently comprising gateways **20**. See column 10, lines 10-12.)

Said third gateway, when receives the call setting message from said first gateway, transmits the call setting message to said third line switching network (Referring to Figures 8 and 16, caller gateway **10** receives the response and selects a proper route based upon the response, gateway **20** inherently transmitting the data. See column 10, lines 10-12.) Mizuta does not disclose *said third line switching network, when receives the call setting message from*

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said third gateway, transmits the received call setting message to said second line switching network.

Haggerty teaches a multicast switching method comprising a source switch that determines whether any local host attached to any of its access ports wishes to join the group address identified in the multicast packet. And, adds an entry to its connection table including the group address, the source address, and an output identifying the port to the local host wishing to join the group (to receive the multicast message) (See column 8, lines 10-16.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement multicast switching method of Haggerty in the system of Mizuta. One of ordinary skill in the art would have been motivated to do so in order to minimize the bandwidth consumption of transmitting multicast packets as taught by Haggerty (See column 2, lines 16-21.)

Regarding claim 8, the primary reference further teaches *wherein each of said third gateways participates or leaves with respect to a group for receiving call-in enable/disable inquiry message* (Referring to Figure 8, each receiver gateway 20 returns IP packets serving as a response to the caller gateway 10. See column 9, lines 61-62.) And, *the call-in enable/disable inquiry message is given to a third gateway which have been participating in the group* (Referring to Figure 8, an optimum route is determined, inherently comprising one of the receiver gateways 20. See column 10, lines 58-59.)

Conclusion

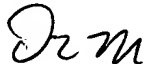
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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald L Mills whose telephone number is 703-305-7869. The examiner can normally be reached on 8:00 AM to 4:30 PM.

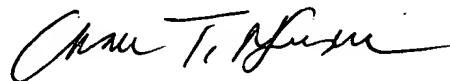
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 703-305-4744. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Donald L Mills



February 23, 2004



CHAU NGUYEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600